

**WEST** **Generate Collection**

L1: Entry 3 of 55

File: USPT

Jun 20, 2000

DOCUMENT-IDENTIFIER: US 6078301 A

TITLE: Computer apparatus for sending video information to an image display apparatus and receiving information from the image display apparatus

DEPR:

In the second embodiment of the present invention, since the control signal is transmitted and received by means of the general-purpose interface, bi-directional communication between the display unit 1d and the computer body 1c can be made. Accordingly, the computer body can recognize whether the display unit 1d has received the control signal exactly or not, how the control state of the display unit 1d at the current time is or whether the display unit 1d is exactly operated or not.

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L1: Entry 11 of 55

File: USPT

Jan 5, 1999

DOCUMENT-IDENTIFIER: US 5856819 A  
TITLE: Bi-directional presentation display

## ABPL:

A bi-directional presentation display device for displaying an image visible to an audience on both sides of the display device. The display device has a pair of screens, each defining an image surface which face in generally opposite directions relative to one another. The display includes a power means for providing power to the pair of screens. A reflective element is disposed between the screens for aiding in illuminating the screens. A single light source concurrently illuminates the screens for displaying an image on the pair of image surfaces.

## BSPR:

The present invention teaches a bi-directional presentation display device for displaying images which are received from a computer or other image source. The presentation display device of the invention has a front and a rear display screen. A front image surface is defined by the front display screen and a rear image surface is defined by the rear display screen. The display screens are positioned such that the front and rear image surfaces face in generally opposite directions relative to one another.

## DEPR:

Referring now in more detail to the drawings, FIG. 1 illustrates a bi-directional presentation display device 10 constructed in accordance with the present invention. Display device 10 in one embodiment has a support bezel 12 of a generally rectangular construction having a bottom member 14 and a top member 16 spaced from the bottom member and generally parallel thereto. Top member 16 and bottom member 14 are interconnected by a first side member 18 and a second side member 20 which perpendicularly connect to the top and bottom members at opposite ends and are generally parallel to one another.

## DEPR:

In yet another embodiment, FIG. 8 illustrates a laptop computer 170 having a bi-directional presentation display device 172 in place of a conventional single image surface screen. Display device 172 has a user image surface 174 and an audience image surface 176. The display is similar in construction to that of display device 10 of FIGS. 1 and 2 but is adapted to communicate with the laptop computer and substitute for the conventional screen. As shown in FIG. 8, display device 172 can be pivoted about the rear portion of a keyboard 178 similar to a conventional laptop computer screen. In one embodiment, laptop computer 170 includes software to control the operation of display device 172 to drive the LCDs in a user only mode or a dual display mode. In the user only mode, no image signal is sent to audience image surface 176 leaving the image surface blank whereas both image surfaces 174 and 176 receive an image signal in the dual display mode. Since a single light source is used to illuminate both image surfaces 174 and 176, both will be illuminated but only an image surface receiving a signal will display an image.

## DEPR:

Presentation quality is also enhanced by using the device of the invention. Images displayed on the screens of the device are produced thereon from direct electronic signals. The images are neither projected, enlarged nor displayed second hand on a surface such as a wall or roll-up film screen and thus will be clearer and sharper. Depending on the type and quality of the display screens used in the bi-directional presentation display device, the device may produce images of exceptional quality, fidelity and resolution.